IN THE CLAIMS

The current status of the claims is reflected in the below listing of claims:

1. (Currently Amended) An alloy for use as a catalyst in oxidation or reduction reactions, the alloy comprising platinum at a concentration that is between about 10 and about 80 atomic percent, zinc at a concentration that is between 24 atomic % and about 70 atomic %, and at least one of nickel and iron at a concentration that is between about 20 atomic % and about 80 atomic % **; wherein the alloy is a fuel cell catalyst** .

2. (Original) The alloy of claim 1 consisting essentially of platinum, zinc, and at least one of nickel and iron.

3. - 5. (Canceled)

6. (Previously Presented) The alloy of claim 1 wherein the concentration of platinum is between about 15 and about 60 atomic percent, the concentration of zinc is between 24 and about 60 atomic percent, and the concentration of nickel, iron, or combination thereof is between about 20 and about 70 atomic percent.

7. (Withdrawn) An alloy for use as a catalyst in oxidation or reduction reactions, the alloy comprising platinum at a concentration that is between about 10 and about 80 atomic percent, zinc at a concentration that is between about 15 and about 60 atomic percent, and nickel at a concentration that is between about 20 and about 70 atomic percent.

8. (Withdrawn) The alloy of claim 7 comprising a concentration of platinum that is between about 15 and about 50 atomic percent, a concentration of zinc that is between about 15 and about 50 atomic percent, and a concentration of nickel that is between about 20 and about 60 atomic percent.

9. (Withdrawn) The alloy of claim 7 comprising a concentration of platinum that is between about 20 and about 35 atomic percent, a concentration of zinc that is between about 20 and about 40 atomic percent, and a concentration of nickel that is between about 30 and about 55 atomic percent.

10. (Withdrawn) The alloy of claim 1 comprising a concentration of platinum that is between about 20 and about 30 atomic percent, a concentration of zinc that is between about 5 and about 15 atomic percent, and a concentration of nickel that is between about 60 and about 70 atomic percent.

11. (Withdrawn) The alloy of claim 1 wherein the concentration of zinc is between 24 and about 70 atomic percent, and the concentration of iron is between about 20 and about 80 atomic percent.

12. (Withdrawn) The alloy of claim 1 wherein the concentration of platinum is between about 20 and about 60 atomic percent, the concentration of zinc is between 24 and about 50 atomic percent, and the concentration of iron is between about 20 and about 80 atomic percent.

13. (Withdrawn -- Currently Amended) ~~The alloy of claim 1~~ **An alloy for use as a catalyst in oxidation or reduction reactions, the alloy** comprising **platinum, zinc, and iron,**

wherein the concentration of platinum is between about 35 and about 50 atomic percent, the concentration of zinc is between 24 and about 35 atomic percent, and the concentration of iron is between about 20 and about 60 atomic percent.

14. (Currently Amended) ~~The alloy of claim 1~~ **An alloy for use as a catalyst in oxidation or reduction reactions, the alloy** comprising **platinum, zinc, and iron, wherein** a concentration of platinum ~~that~~ is between about 40 and about 60 atomic percent, a concentration of zinc ~~that~~ is between 24 and about 30 atomic percent, and a concentration of iron ~~that~~ is between about 25 and about 50 atomic percent.

15. (Withdrawn) The alloy of claim 1 comprising a concentration of platinum that is between about 20 and about 40 atomic percent, a concentration of zinc that is between 24 and about 50 atomic percent, and a concentration of iron that is between about 25 and about 40 atomic percent.

16. (Withdrawn) A supported electrocatalyst powder for use in electrochemical reactor devices, the supported electrocatalyst powder comprising the alloy of claim 1 and electrically conductive support particles upon which the alloy is dispersed.

17. (Withdrawn) The supported electrocatalyst powder of claim 16 wherein the electrically conductive support particles are selected from the group consisting of inorganic supports and organic supports.

18. (Withdrawn) The supported electrocatalyst powder of claim 17 wherein the electrically conductive support particles

are selected from the group consisting of carbon supports and electrically conductive polymer supports.

19. (Withdrawn) A fuel cell electrode, the fuel cell electrode comprising electrocatalyst particles and an electrode substrate upon which the electrocatalyst particles are deposited, the electrocatalyst particles comprising the alloy of claim 1.

20. (Withdrawn) The fuel cell electrode of claim 19 wherein the electrocatalyst particles comprise electrically conductive support particles upon which the alloy is dispersed.

21. (Withdrawn) The fuel cell electrode of claim 20 wherein the electrically conductive support particles are selected from the group consisting of carbon supports and electrically conductive polymer supports.

22. (Withdrawn) A fuel cell comprising an anode, a cathode, a proton exchange membrane between the anode and the cathode, and the alloy of claim 1 for the catalytic oxidation of a hydrogen-containing fuel or the catalytic reduction of oxygen.

23. (Withdrawn) The fuel cell of claim 22 wherein the alloy is dispersed on electrically conductive support particles.

24. - 27. (Canceled)

28. (Withdrawn) The fuel cell of claim 22 wherein the alloy is on the surface of the anode and in contact with the proton exchange membrane.

29. (Withdrawn) The fuel cell of claim 22 wherein the alloy is on the surface of the proton exchange membrane and in contact with the cathode.

30. (Withdrawn) The fuel cell of claim 22 wherein the alloy is on the surface of the cathode and in contact with the proton exchange membrane.

31. (Withdrawn) A method for the electrochemical conversion of a hydrogen-containing fuel and oxygen to reaction products and electricity in a fuel cell comprising an anode, a cathode, a proton exchange membrane therebetween, the alloy of claim 1, and an electrically conductive external circuit connecting the anode and cathode, the method comprising contacting the hydrogen-containing fuel or the oxygen and the alloy to catalytically oxidize the hydrogen-containing fuel or catalytically reduce the oxygen.

32. - 35. (Canceled)

36. (Previously Presented) The alloy of claim 1 wherein the zinc concentration is at least 29 atomic %.

37. (Withdrawn) The unsupported alloy layer of claim 35 wherein the zinc concentration is at least 29 atomic %.

38. (New) The alloy of claim 1 wherein the platinum concentration is at least 28 atomic % and the concentation of the at least one of nickel and iron is at least 25 atomic %.

39. (New) The alloy of claim 1 wherein the platinum concentration is at least 32 atomic %.

40. (New) The alloy of claim 1 wherein the alloy is a particulate material.

41. (New) The alloy of claim 1 wherein the alloy is supported on electrically conductive carbon support particles.

42. (New) The alloy of claim 1 wherein the alloy is supported on electrically conductive polymer supports.

43. (New) The alloy of claim 1 wherein the alloy is on the surface of a proton exchange membrane and in contact with a fuel cell anode.

44. (New) The alloy of claim 1 wherein the alloy is an unsupported catalyst layer on a surface of an electrolyte membrane or on a surface of an electrode.